



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,039	12/19/2001	Mark Weaver	TI-33353	5821

23494 7590 07/30/2004

TEXAS INSTRUMENTS INCORPORATED  
P O BOX 655474, M/S 3999  
DALLAS, TX 75265

EXAMINER

YENKE, BRIAN P

ART UNIT PAPER NUMBER

2614

DATE MAILED: 07/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/025,039

Applicant(s)

WEAVER ET AL.

Examiner

BRIAN P. YENKE

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 24-25 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Hill, Jr, US 5,790,096.

In considering claims 24 and 29,

*a) the claimed programming line types for lines to be displayed in a frame is met where the universal video input selector receives any one video type including SDTV, HDTV, composite/component signals and computer (VGA, SVGA etc) signal and determines the format of the received signal in order to properly receive/display the signal*

*b) the claimed programming horizontal timing and voltage levels for the line types is met where the system determines the proper horizontal timing and voltage level of the received signal in order to be displayed (Table IV, V, VI, VII, VIII, XI).*

*c) the claimed programming horizontal timings and voltage levels for synchronization signals associated with the line types is met where the system determines the proper horizontal timing and voltage level of the received signal in order to be displayed (Table IV, V, VI, VII, VIII, XI).*

Art Unit: 2614

In considering claim 25,

*The claimed programming the display timing generator to provide one of embedded and dedicated synchronization signals* is met where by microprocessor 36 along with pixel clock generator 28 and flat panel generator 29 (Fig 1) to provide/generate the correct synchronization signals in order to properly display the various input signals.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-23, 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill, Jr. US 5,790,906 in view of Harbarger et al., US 4,670,782.

In considering claims 1-7, 9, 12, 13, 16, 20-21, 23 and 26-27

a) *the claimed a programming interface* is met where the user can display any video format including VGA, SVGA, XGA, NTSC, PAL, SECAM, HDTV and all other forms of RGB video, either interlaced or non-interlaced with composite or separate synchronization signals (col 2, line 28-31). Thus the user can select what type of signal is to be displayed, based upon the devices which are

Art Unit: 2614

connected to the video input plug-in module 10, which may accommodate a variety of inputs.

*b) the claimed a signal generator operative to receive digital video* is met by microprocessor 36 along with pixel clock generator 28 and flat panel generator 29 (Fig 1) to provide/generate the correct synchronization signals in order to properly display the various input signals.

However, Hill does not explicitly recite selecting timing parameters associated with the selected line types (i.e. HDTV, SDTV). Hill does disclose a system where the user can alter the size/zoom/shrink the image, change the position/orientation of the image on the screen, change the contrast and brightness via configuration switches 45 (col 12-21, Fig 1). Hill discloses a system which automatically controls the timing parameters based upon the type of signal received.

Although, the manual input/programming of timing parameters are notoriously well known in the art, the examiner nonetheless incorporates Harshbarger et al., US 4,670,782, which discloses a TV system which allows the user to input via a keyboard for entering pulse width and timing parameters for a video scanning rate.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hill which discloses the automatic processing of a variety of input video signals, with Harshbarger by allowing the user to enter via keyboard desired timing parameters associated with a respective input signal,

Art Unit: 2614

which would provide the viewer the option of viewing signals at various rates, thereby creating a user controlled viewing environment.

In considering claim 8,

*The claimed a state machine that monitors time duration of video lines...* is met by microprocessor 36

In considering claim 10,

*The claimed being integrated into a component video and personal computer graphics D/A converter system* is met where the system includes microprocessor 36 along with pixel clock generator 28 and flat panel generator 29 (Fig 1) to provide/generate the correct synchronization signals for composite/component (RGB) signals, where the system includes a D/A converter from microprocessor 36 to power control 53 (Fig 1, col 16, line 6-21). order to properly display the various input signals.

In considering claim 11,

Hill does not explicitly recite the use of an integrated circuit.

Although the use or incorporate of logic elements onto a integrated circuit are conventional in order to provide increased functionality with reduce space, the examiner nonetheless relies again on Harshbarger which utilizes varies integrated circuits, in the TV receiver.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hill which discloses the reception of any input signal which can be converted/processed for display, with Harshbarger by

Art Unit: 2614

utilizing integrated circuitry which would provide the same functionality yet occupy less space than a non-integrated circuit.

In considering claims 14-15, and 28

Hill does not explicitly recite a master timing mode (user programmed).

Hill does disclose a timing mode which determines/programs the system based upon the received signal (i.e. slave mode).

The examiner incorporated Harshbarger above, in claim 1, to illustrate that a user programmable mode (i.e. master timing mode) is conventional in the art, where a Harshbarger allows the user to custom select timing parameters associated with a scanning rate.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hill which discloses the automatic processing of various input signals for display, with Harshbarger by allowing the user to custom select timing parameters associated with a scanning rate, thereby providing the user the option of using a custom or conventional display scheme.

In considering claims 17,

For limitations a/b refer to rejection of claim 1 above. Regarding limitation c, the D/A system.

Hill discloses a digital display, however the use of an analog display is conventional in the art, thus the examiner takes "OFFICIAL NOTICE" regarding an analog display.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hill and Harshbarger which discloses a digital

Art Unit: 2614

display, which receives both analog and digital signals, by also converting a signal into a analog signal in the event the user had an analog display.

In considering claim 18,

Regarding the source being a set-top box, a DVD player or a computer graphics card, Hill does not explicitly recite such devices.

However, Hill does disclose a video source plug in module 10, which may be interchanged with a plurality of other plug-in input connectors to accommodate a wide variety of vide input types (col 5, line 6-10). Hill also discloses the a variety of video formats including VGA, SVGA, XGA, NTSC, PAL, SECAM, HDTV and all other forms of RGB video, either interlaced or non-interlaced with composite or separate synchronization signals (col 2, line 28-31).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify, Hill and Harshbarger which discloses the reception/display of a variety of input signals, by allowing the user to connect conventional devices such as a set-top box, DVD player or computer graphics card as an input, thereby providing the user the option/selection of a desired device/input.

In considering claim 22,

Hill discloses a sync separator 14 which is programmed by microprocessor 36 to detect the occurrence of a specific number of serration and equalization pulses 76 in waveform 75 (Fig 2b), in order to determine the vertical sync period (col 13, line 60 to col 14, line 4).



Art Unit: 2614

***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure—see newly cited references on attached form PTO-892.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (703) 305-9871. The examiner work schedule is Monday-Thursday, 0730-1830 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John W. Miller, can be reached at (703)305-4795.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-HELP.

General information about patents, trademarks, products and services offered by the United States Patent and Trademark Office

Art Unit: 2614

(USPTO), and other related information is available by contacting the USPTO's General Information Services Division at:

800-PTO-9199 or 703-308-HELP

(FAX) 703-305-7786

(TDD) 703-305-7785

An automated message system is available 7 days a week, 24 hours a day providing informational responses to frequently asked questions and the ability to order certain documents. Customer service representatives are available to answer questions, send materials or connect customers with other offices of the USPTO from 8:30 a.m. - 8:00p.m. EST/EDT, Monday-Friday excluding federal holidays.


For other technical patent information needs, the Patent Assistance Center can be reached through customer service representatives at the above numbers, Monday through Friday (except federal holidays) from 8:30 a.m. to 5:00 p.m. EST/EDT.

General information brochures can also be obtained in person from the Patent Search Room located in Crystal Plaza 3, Room 1A03, 2021 South Clark Place, Arlington, VA 22202.

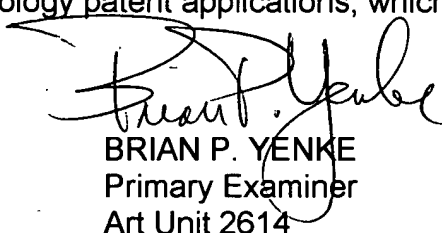
The Patent Electronic Business Center (EBC) allows USPTO customers to retrieve data, check the status of pending actions, and submit information and applications. The tools currently available in the Patent EBC are Patent Application Information Retrieval (PAIR) and the Electronic Filing System (EFS).

Art Unit: 2614

PAIR (<http://pair.uspto.gov>) provides customers direct secure access to their own patent application status information, as well as to general patent information publicly available. EFS allows customers to electronically file patent application documents securely via the Internet. EFS is a system for submitting new utility patent applications and pre-grant publication submissions in electronic publication-ready form. EFS includes software to help customers prepare submissions in extensible Markup Language (XML) format and to assemble the various parts of the application as an electronic submission package. EFS also allows the submission of Computer Readable Format (CRF) sequence listings for pending biotechnology patent applications, which were filed in paper form.



B.P. Y  
23 July 2004



BRIAN P. YENKE  
Primary Examiner  
Art Unit 2614